

REMARKS

Claims 1, 4-7 and 12-15 are pending in this application. By this Amendment, claim 1 is amended. Claims 8, 9 and 11 are canceled without prejudice to, or disclaimer of, the subject matter recited therein. Support for the amendments can be found, for example, in the specification (see paragraphs [0025] to [0028], [0048], [0050] and [0061] to [0063]). No new matter is added.

Reconsideration and allowance of the claims are respectfully requested in view of the foregoing amendments and the following remarks.

I. Rejection Under 35 U.S.C. §112

The Patent Office rejects claims 1, 8, 9 and 11 under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. Claims 8, 9 and 11 are canceled, thus rendering the rejection moot as to those claims. Without conceding the propriety of the rejection, claim 1 is amended, as shown above, to obviate the rejection. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

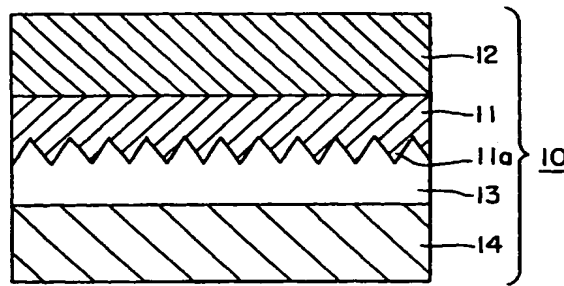
II. Rejection Under 35 U.S.C. §103

The Patent Office rejects claims 1, 4-9 and 11-15 under 35 U.S.C. §103(a) as allegedly being unpatentable over European Patent No. 1,028,359 A1 to Shiozawa et al. ("Shiozawa"). Claims 8, 9 and 11 are canceled, thus rendering the rejection moot as to those claims. As to the remaining claims, this rejection is respectfully traversed.

Shiozawa would not have rendered obvious the subject matter of claim 1.

A. Shiozawa's Device

Shiozawa is directed to an authenticity identifying film **10** in which a hologram forming layer **11a** is formed below a reflective film **11** (Shiozawa, paragraph [0031] and Fig. 1). The hologram forming layer **11a** is formed during use of the authenticity identifying film **10**. Figure 1 of Shiozawa is reproduced below for convenience.

**FIG. 1****Figure 1 of Shiozawa**

The hologram forming part 11a of Shiozawa "reflects light of the same circular polarization as that of the reflected light reflected by the reflective film 11 in a direction different from that of the reflected light to form a holographic image" (Shiozawa, paragraph [0031]). The reflective film 11 of Shiozawa reflects "only either of right-handed circularly polarized light and left-handed circularly polarized light on its surface with the protective layer 12 or in the reflective film 11 to produce reflected light" (*Id.*).

The reflective film 11 has a cholesteric liquid crystal phase, which has the feature of "selective refractivity," which Shiozawa defines as a property to reflect light in a specific waveband more strongly than light of a wavelength in another waveband (Shiozawa, paragraph [0042] and Fig. 3). Figure 3 of Shiozawa, illustrating "selective refractivity," is reproduced below for convenience.

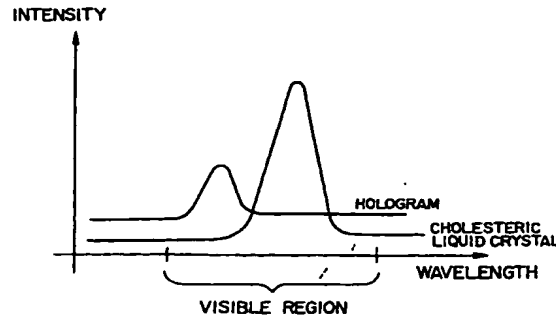


FIG. 3

Figure 3 of Shiozawa

B. Optical Effects of Shiozawa

Shiozawa discloses that in cases where the twisting direction of the cholesteric liquid crystal phase of the reflective film 11 is right-handed and the light source 21 emits natural light, a detector 22a receives right-handed circularly polarized light, as the reflected light of the reflective film 11 (Shiozawa, paragraph [0050] and Fig. 4(A)).

A second detector 22b is disposed to receive light that is reflected and diffracted by the hologram forming part 11a. The light reflected by the hologram forming part 11a is also right-handed circularly polarized light, which is the same as the reflected light of the reflective film 11 (*Id.*). Figure 4(A) of Shiozawa is reproduced below for convenience.

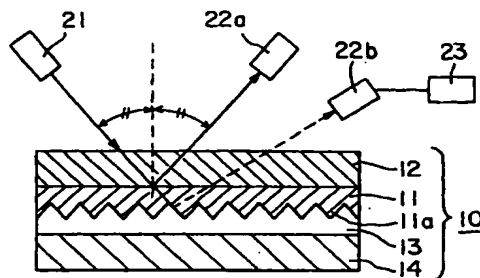


FIG. 4(A)

Figure 4(A) of Shiozawa

Thus, as described in detail above, Shiozawa merely discloses an authenticity identifying film having a single reflective film 11 that forms a hologram forming part 11a during operation. The light reflected by the hologram forming part 11a is the same light as the reflected light of the reflective film 11.

C. Claim 1

There remains an ongoing fight against the illegal use of falsified or counterfeit articles (e.g. certificates, money, tickets, photos, documents) in a variety of settings. In order to prevent the illegal production, use and /or transport of such articles, techniques for determining the authenticity of such articles remain useful and advantageous. Therefore, a need exists for a discrimination medium, which is difficult to falsify, and yields superior results with respect to determining the authenticity of an article (specification, paragraphs [0001] to [0007]). The claimed discrimination medium addresses these and other needs by providing a discrimination medium comprising, *inter alia*: (1) a cholesteric liquid crystal layer provided on the first adhesive layer, the cholesteric liquid crystal layer having a circular polarization light selectivity of reflecting predetermined circularly polarized light as a first reflection light; (2) a multilayer film having a stacked structure in which a plurality of first light transparent films having a first refraction index and a plurality of second light transparent films having a second refraction index are alternately laminated in a thickness direction, each first light transparent film and each second light transparent film having an interface therebetween, each interface reflecting light so as to generate interfering light, wherein the cholesteric liquid crystal layer and the multilayer film are arranged in a direction in which natural light may enter, the multilayer film reflects the interfering light as a second reflection light, and the discrimination medium is discriminated by using the first reflection light and the second reflection light, and:

- the first reflection light is circularly polarized light having a predetermined center wavelength and a predetermined polarization direction, and
- the second reflection light includes circularly polarized light having a circularly polarized direction opposite to that of the first reflection light,
- wherein the second reflection light shows a blue shift in which a color of the reflection light is changed when a viewing angle is changed,
- wherein when the discrimination medium is viewed at a predetermined angle, the first reflection light reflected by the cholesteric liquid crystal layer and the second reflection light reflected by the multilayer film are approximately equal to each other in color,
- when the discrimination medium is viewed through a circularly polarized light filter allowing the first reflection light to selectively pass therethrough, the second reflection light is not viewed but the first reflection light is selectively viewed, and
- when the discrimination medium is viewed through a circularly polarized light filter allowing circularly polarized light having a circularly polarized direction opposite to that of the first reflection light to selectively pass therethrough, the first reflection light is not viewed but the second reflection light is selectively viewed.

Exemplary effects of the discrimination medium recited in claim 1 are presented below in

Table 1.

Table 1

| | FILTER | |
|--|---|--|
| | Circularly polarized light filter allowing the first reflection light to selectively pass therethrough | Circularly polarized light filter allowing circularly polarized light having a circularly polarized direction opposite to that of the first reflection light to selectively pass therethrough |
| First Reflection Light: circularly polarized light having a predetermined center wavelength and a predetermined polarization direction (reflected by the cholesteric liquid crystal layer) | Viewed | Not Viewed |
| Second Reflection Light: circularly polarized light having a circularly polarized direction opposite to that of the first reflection light (reflected by the multilayer film) | Not Viewed | Viewed |

As shown in Table 1, optical characteristics of the cholesteric liquid crystal layer and optical characteristics of the multilayer film can be seen separately with the use of filters, and the difference between the two can be discriminated. When the claimed discrimination medium is viewed by changing the predetermined viewing angle, the interfering conditions of the multilayer film are significantly changed, such that the discrimination medium can be effectively discriminated (specification, paragraph [0066]).

The above-described features and optical effects of the claimed device are nowhere disclosed, taught or suggested by Shiozawa. Shiozawa does not provide any reason or rationale for one of ordinary skill in the art to have modified Shiozawa in the manner necessary to have obtained Applicants' discrimination medium, with any reasonable expectation of success, without the benefit of Applicants' specification, and without destroying the intended structure and effect of Shiozawa.

The Patent Office continues to assert that because Shiozawa discloses that the multilayered films "may be any one of mediums having optical selective reflectivity and circularly polarized light selectivity," one of ordinary skill in the art would have allegedly been motivated or have had a reason to have modified the device of Shiozawa in the manner necessary to have obtained Applicants' claimed discrimination medium (Office Action, pages 5-6). However, the overwhelming differences between the optical effects and design of Applicants' claimed discrimination medium and Shiozawa's device would not have been addressed or modified simply by changing chemical media (e.g., polymer films formed through fixation of cholesteric liquid crystal orientation, films formed by dispersing a cholesteric liquid crystal in mediums and/or various high-molecular or low-molecular weight cross-linked crystals; see Shiozawa, paragraphs [0033] to [0035]).

Mere changes in the chemical medium, resulting in the same reflective film 11 of Shiozawa, is insufficient as a reason, rationale or motivation for one of ordinary skill in the art to have modified the device of Shiozawa in the manner necessary to have obtained Applicants' device and distinctive optical effects.

Based on the above, Shiozawa would not have rendered claim 1 obvious. The remaining claims variously depend from claim 1 and, likewise, would not have been rendered obvious by the applied references, for at least the reasons set forth about with respect to claim 1, as well as for the additional features recited therein.

Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:

Petition for Extension of Time

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